# IB IL INC Z

1 incremental encoder input, 4 digital inputs 24 V DC,
4 digital outputs 24 V DC, 500 mA, 3-wire connection

Design width 48.8

| | (IEC) [$mm^2$] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| Spring clamp | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS incremental encoder interface terminal**<br>each without connector set | **IB IL INC** | **28 36 32 4** | 1 |
| **Accessories** | | | |
| **Connector set** | **IB IL SSI/INC-PLSET** | **27 32 47 3** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **User manual** | **IB IL SSI/INC UM** | **27 32 56 7** | 1 |
| **Zack strip labeling,**<br>several versions, see catalog part 3/4 | **ZBFM 6-...** | | |

## Technical data

| | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | Inline voltage jumper |
| **Power supply** | |
| Communications power | 7 V DC (via voltage jumper) |
| Current consumption | 90 mA, typical |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5% |
| Range | 19.2 to 30 V DC (ripple included) |
| Encoder supply | 5 V DC/ 500 mA |
| | 24 V DC/ 500 mA |
| Encoder supply, input and output voltage from | segment circuit |
| **Electrical isolation** | |
| Logic / I/Os | 500 V AC test voltage [1]) |
| I/Os / functional earth ground | 500 V AC test voltage [1]) |
| **Incremental encoder input** | |
| Adjustable resolution | max 26 bits |
| Input frequencies | 0 - 50 kHz (24V) or 0 - 500 kHz (5V) |

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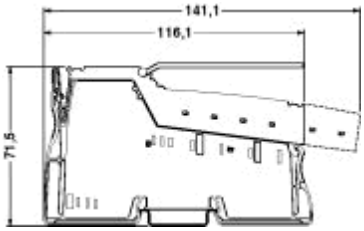
| | |
|---|---|
| Encoder data | symmetrical and asymmetrical encoders |
| **Inputs**[2]) | |
| Number of inputs | 4 |
| Connection method | 3-wire |
| **Outputs**[2]) | |
| Number of outputs | 4 |
| Connection method | 3-wire |
| **Diagnostic messages via the bus** | |
| Short-circuit, overload of an output | yes |
| Local diagnostics | |
| Bus active (D) | LED green on |
| Communications power not present (D) | LED green out |
| Communications power present/ bus not active (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device defective (D) | LED green (flashes at 4 Hz) |
| Encoder supply 5 V DC present | LED green on |
| Encoder supply 24 V DC present | LED green on |
| Status indicator per input/output | LED yellow |

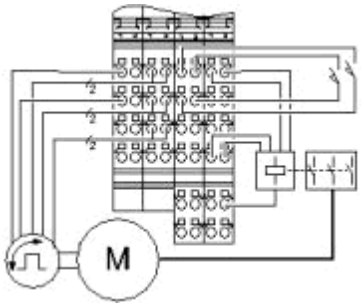
[1]) Only system with bus terminal, power terminal and I/O termnial

[2]) Please refer to user manual for further technical data

**Dimensional drawing**




**Block diagram**

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# IB IL SSI Z

1 absolute encoder input, 4 digital inputs 24 V DC,
4 digital outputs 24 V DC, 500 mA, 3-wire connection
Design width 48.8

| | (IEC) [$mm^2$] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| Spring clamp | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS absolute encoder interface terminal** | **IB IL SSI** | **28 36 34 0** | 1 |
| **Accessories** | | | |
| **Connector set** | **IB IL SSI/INC-PLSET** | **27 32 47 3** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **User manual** | **IB IL SSI/INC UM** | **27 32 56 7** | 1 |
| **Zack strip labeling,** several versions, see catalog part 3/4 | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | Inline voltage jumper |
| **Power supply** | |
| Communications power | 7 V DC (via voltage jumper) |
| Current consumption | 40 mA, typical |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5% |
| Range | 19.2 to 30 V DC (ripple included) |
| Encoder supply | 5 V DC/ 500 mA |
| | 24 V DC/ 500 mA |
| Encoder supply, input and output voltage from | segment circuit |
| **Electrical isolation** | |
| Logic / I/Os | 500 V AC test voltage [1]) |
| I/Os / functional earth ground | 500 V AC test voltage [1]) |
| **Absolute encoder input** | |
| Adjustable resolution | max 26 bits |
| Transmission frequency (clock) | 200, 400, 800 kHz and 1.5 Mhz |
| Transmission type | gray code, binary code |
| Encoder data | single-turn and multi-turn encoder |

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| | |
|---|---|
| Encoder data | single-turn and multi-turn encoder |

**Inputs**[2])

| | |
|---|---|
| Number of inputs | 4 |
| Connection method | 3-wire |

**Outputs**[2])

| | |
|---|---|
| Number of outputs | 4 |
| Connection method | 3-wire |

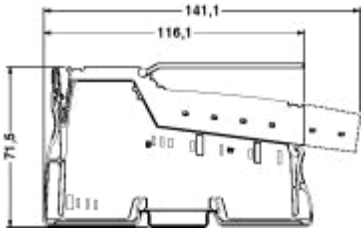
**Diagnostic messages via the bus**

| | |
|---|---|
| Short-circuit, overload of an output | yes |
| Local diagnostics | |
| Bus active (D) | LED green on |
| Communications power not present (D) | LED green out |
| Communications power present/ bus not active (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device defective (D) | LED green (flashes at 4 Hz) |
| Encoder supply 5 V DC present | LED green on |
| Encoder supply 24 V DC present | LED green on |
| Status indicator per input/output | LED yellow |

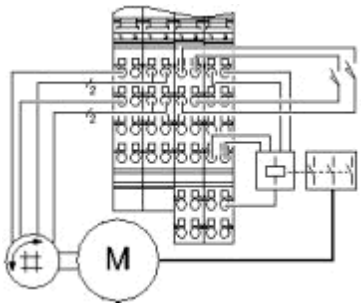
[1]) Only in system with bus terminal, power terminal and I/O terminal

[2]) Please refer to the user manual or further technical data

**Dimensional drawing**




**Block diagram**

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# IB IL AI 2/SF Z

2 inputs, 0-20 mA, 4-20 mA, 20 mA, 0-10 V, 10 V, 2-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS analog input terminal block** without connector | **IB IL AI 2/SF** | **27 26 28 5** | 1 |
| **Accessories** | | | |
| **Shield connector**, without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | | |
|---|---|---|
| **Interfaces** | voltage input | current intput |
| INTERBUS local bus | INLINE voltage jumper | |
| **Power supply** | | |
| Communication power | 7 V DC (via voltage jumper) | |
| Current consumption | approx. 45 mA | |
| Analog voltage | 24 V DC (via voltage jumper) | |
| Current consumption | approx. 12 mA | |
| **Electrical isolation** | | |
| Logic UL/I/O | 500 V AC test voltage[1]) | |
| I/O/functional earth | 500 V AC test voltage[1]) | |
| **Local diagnostics** | | |
| Bus active (D) | LED green on | |
| Communication power not present (D) | LED green off | |
| Communication power present/ bus inactive (D) | LED green (flashes with 0.5 Hz) | |
| I/O error (D) | LED green (flashes with 2 Hz) | |
| Previous device faulty (D) | LED green (flashes with 4 Hz) | |
| **Diagnostics messages via the bus** | | |
| Overrange | yes | |
| Error of internal I/O voltage | yes | |

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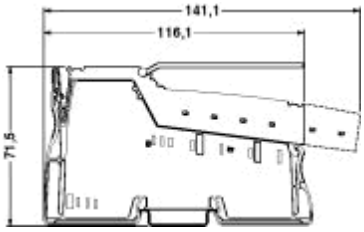
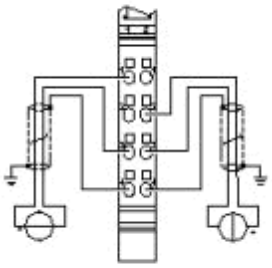
| | | |
|---|---|---|
| **Line interrupt detection** | yes, for the range of 4 - 20 mA | |
| **Inputs** | | |
| Number of inputs | 2, single ended | |
| Connection method | 2-wire (shielded) | |
| Input range | 0- 10 V, ± 10 V | 0-20mA, 4-20mA, 20mA |
| Input resistance | 220 k Ω | 50Ω |
| Measurement principle | successive approximation | |
| Representation of measured value | 16 bits two's complement | |
| Measured value resolution | 16 bits (15 bits + sign) | |
| Bit weight | 333.33 µV | 0.666µA, 0.533µA |
| A/D conversion time per channel | 100 µs | |
| Process data update | < 2 ms | |
| 3 dB cut-off frequency | 15 Hz/ 40 Hz without averaging | |
| Basic error limit | 0.015 % | |
| Data formats | IBS IL, IBS ST, IBS RT, standardized representation | |
| **Number of connectors necessary** | 1 | |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL TEMP 2 RTD Z

2 inputs, RTD (resistance temperature detector),
2, 3, 4-wire connection

Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS analog input terminal block** without connector | **IB IL TEMP 2 RTD** | **27 26 30 8** | 1 |
| **Accessories** | | | |
| **Shield connector**, without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 45 mA |
| Analog voltage | 24 V DC (via voltage jumper) |
| Current consumption | approx. 12 mA |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green off |
| Communication power not present (D) | LED green (flashes with 0.5 Hz) |
| Communication power present/ bus inactive (D) | LED green (flashes with 2 Hz) |
| I/O error (D) | LED green (flashes with 4 Hz) |
| Previous device faulty (D) | LED green on |
| Status display per input | LED yellow |
| **Diagnostics messages via the bus** | |
| Overrange | yes |

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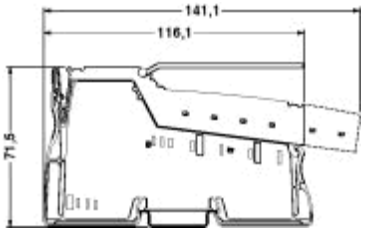
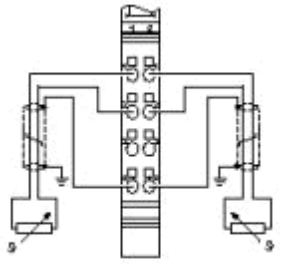
| | |
|---|---|
| Overrange | yes |
| Error of internal I/O voltage | yes |
| **Line interrupt detection** | yes |
| **Inputs** | |
| Number of inputs | 2 |
| Connection method | 2, 3, 4-wire (shielded) |
| Input range | PT, NI 10-2000 (DIN/SAMA), Cu 10/50/53 KTY 81, KTY 84 |
| Input resistance | – |
| Measurement principle | 0…4000 Ω |
| Representation of measured value | successive approximation |
| Measured value resolution | 16 bits two's complement and other |
| Bit weight | 16 bits |
| A/D conversion time per channel | depending on sensor/setting |
| Process data update | < 100 µs |
| 3 dB cut-off frequency | approx. 20 ms |
| Basic error limit | 0.01 % |
| Data formats | 400 µA |
| **Number of connectors necessary** | 1 |

[1]) Only on system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL TEMP 2 UTH Z

2 inputs, TC (thermocouple),2-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS analog input terminal block** without connector | **IB IL TEMP 2 UTH** | **27 27 76 3** | 1 |
| **Accessories** | | | |
| **Shield connector**, without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| Technical data | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 45 mA |
| Analog voltage | 24 V DC (via voltage jumper) |
| Current consumption | approx. 12 mA |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes with 0.5 Hz) |
| I/O error (D) | LED green (flashes with 2 Hz) |
| Previous device faulty (D) | LED green (flashes with 4 Hz) |
| Status display per input | LED yellow |
| **Diagnostics messages via the bus** | |
| Overrange | yes |

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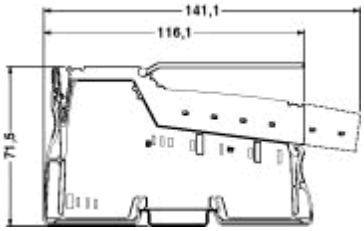
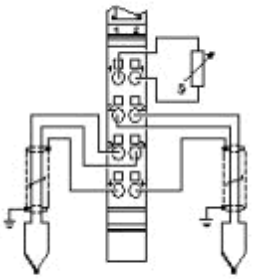
| | |
|---|---|
| Error of internal I/O voltage | yes |
| **Line interrupt detection** | yes |
| **Inputs** | |
| Number of inputs | 2 + external reference point sensor |
| Connection method | 2-wire (shielded) |
| Input range | sensors: J, K, L, U, B, E, N, R, S, T, C, W, HK;<br>ext. CJ: PT 1000 |
| Input resistance | - 15 to + 85 mV |
| Measurement principle | – |
| Representation of measured value | successive approximation |
| Measured value resolution | 16 bits two's complement and other |
| Bit weight | 16 bits |
| A/D conversion time per channel | depending on sensor/setting |
| Process data update | < 100 µs |
| 3 dB cut-off frequency | approx. 20 ms |
| Basic error limit | 0.01 % |
| Data formats | – |
| **Number of connectors necessary** | 1 |

[1]) Only on system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL AO 1/SF Z

1 output, 0-20 mA, 4-20 mA, 0-10 V
2-wire connection
Design width 24.4

| | (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS analog output terminal block**, without connector | **IB IL AO 1/SF** | **27 26 29 8** | 1 |
| **Accessories** | | | |
| **Shield connector**, without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | | |
|---|---|---|
| **Interfaces** | voltage input | current input |
| INTERBUS local bus | INLINE voltage jumper | |
| **Power supply** | | |
| Communication power | 7 V DC (via voltage jumper) | |
| Current consumption | approx. 30 mA | |
| Analog voltage | 24 V DC (via voltage jumper) | |
| Current consumption | approx. 50 mA | |
| **Electrical isolation** | | |
| Logic UL/I/O | 500 V AC test voltage[1]) | |
| I/O/functional earth | 500 V AC test voltage[1]) | |
| **Local diagnostics** | | |
| Bus active (D) | LED green on | |
| Communication power not present (D) | LED green off | |
| Communication power present/bus inactive (D) | LED green (flashes with 0.5 Hz) | |
| I/O error (D) | LED green (flashes with 2 Hz) | |
| Previous device faulty (D) | LED green (flashes with 4 Hz) | |
| 15 V I/O voltage present (UB) | LED green on | |
| **Outputs** | | |

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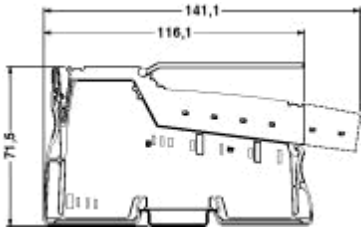
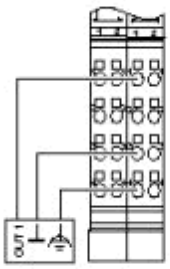
| | | |
|---|---|---|
| Number of outputs | 1 | |
| Connection method | 2-wire | |
| Output range | 0…10 V | 4…20 mA, 0…20 mA |
| Load impedance | > 5 kΩ | < 500 Ω |
| Representation of output values | 16 bit | |
| DAC resolution | 16 bit | |
| Bit weight | 0.15 mV | 0.24 µA, 0.31 µA |
| A/D conversion time per channel | < 100 µs | |
| Basic error limit | 0.05 % | |
| Error type $U_{OUT}$ | ± 0.5 % | |
| $I_{OUT}$ | ± 0.8 % | |
| Transient protection of outputs | yes | |
| **Number of connectors necessary** | 1 | |

[1]) Only on system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL AO 1/U/SF Z

1 output, 0-10 V
2-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS analog output terminal block** without connector | **IB IL AO 1/U/SF** | **27 27 77 6** | 1 |
| **Accessories** | | | |
| **Shield connector**, without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 30 mA |
| Analog voltage | 24 V DC (via voltage jumper) |
| Current consumption | approx. 15 mA |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/bus inactive (D) | LED green (flashes with 0.5 Hz) |
| I/O error (D) | LED green (flashes with 2 Hz) |
| Previous device faulty (D) | LED green (flashes with 4 Hz) |
| 15 V I/O voltage present (UB) | – |
| **Outputs** | |
| Number of outputs | 1 |

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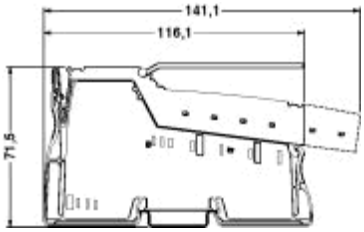
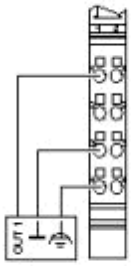
| | |
|---|---|
| Connection method | 2-wire |
| Output range | 0…10 V |
| Load impedance | > 5 kΩ |
| Representation of output values | 16 bit |
| DAC resolution | 16 bit |
| Bit weight | 0.15 mV |
| A/D conversion time per channel | < 100 µs |
| Basic error limit | 0.05 % |
| Error type $U_{OUT}$ | ± 0.5 % |
| $I_{OUT}$ | – |
| Transient protection of outputs | yes |
| **Number of connectors necessary** | 1 |

[1]) Only on system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**

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# IB IL 24 SL Z

INTERBUS-Loop branch terminal blocks
width 24,4

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS Loop branch terminal**, without connector | **IB IL 24 SL** | **27 27 88 6** | 1 |
| **Accessories** | | | |
| I/O connector, without color print | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

## Technical data

| | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| INTERBUS-Loop | INLINE connector |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 50 mA |
| INTERBUS Loop | 28.5 V DC (via voltage jumper) |
| **INTERBUS Loop data** | |
| max. total distance | 200 m |
| max. distance between two devices | 20 m |
| max. distance from 1st device | 20 m |
| Total permissible current consumption of devices | 1.8 A |
| **Local diagnostics** | |
| Supply INTERBUS Loop present | LED green (USL) |
| **Number of connectors necessary** | 2 |

## Dimensional drawing

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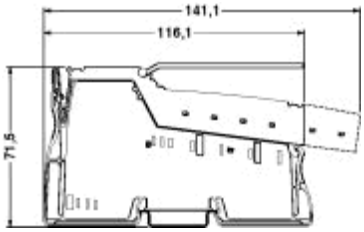
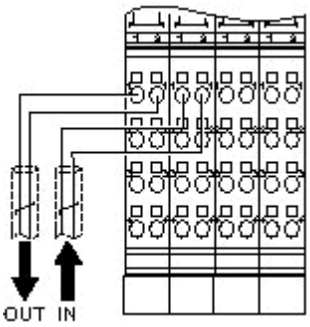



**Block diagram**

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# IBS IL 24 BK-T Z

INTERBUS bus terminal module, 24 V DC
Width 48.8

| (IEC) | rigid | flexible | |
|---|---|---|---|
| [mm²] | solid | stranded | AWG |
| Connection data | | | |
| - Spring cage | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS bus terminal module,** without connector | **IBS IL 24 BK-T** | **27 26 18 8** | 1 |
| **Accessories** | | | |
| **Connector set** | **IB IL BK-PLSET** | **27 27 79 2** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **End clamp** | **CLIPFIX 35** | **30 22 21 8** | 1 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS remote bus (incoming/outgoing) | 2 x 6-pos INLINE shield connector |
| Supply voltage | 8-pos. INLINE input connector |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Supply voltage | |
| – Nominal value | 24 V DC |
| – Ripple | 5 % |
| – Range | 19 to 30 V DC (including ripple) |
| **Current consumption** | |
| without connected IB IL-I/O terminals | approx. 90 mA |
| **Max. total perm. curr. consumption of all I/O terminals** | |
| Communication power (7 V) | ≤ 2 A |
| Analog supply (24 V) | ≤ 0.5 A |
| **Electrical isolation** | |
| Incoming remote bus/outgoing remote bus/local bus | 500 V AC test voltage |
| **INTERBUS data** | |
| max. distance from next remote bus station | 400 m |

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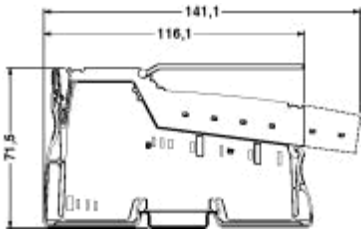
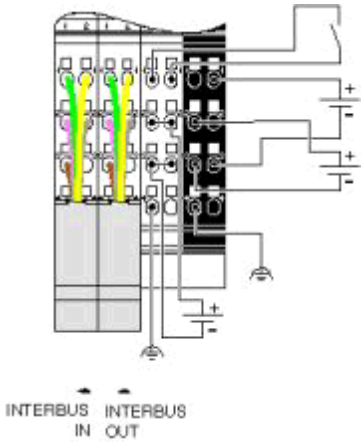
| | |
|---|---|
| Number of connectable modules | 63 |
| Number of connectable INLINE terminals (without additional power terminal) | 20 (observe total permissible current consumption) |
| **Programmable functions** | |
| Local bus branch disabled | yes |
| Local bus reset | yes |
| Local bus disabled | yes |
| Remote bus disabled | yes |
| Remote bus reset | yes |
| **Local diagnostics** | |
| Remote bus active (BA) | LED green |
| Remote bus connection OK (RC) | LED green |
| Outgoing remote bus disabled (RD) | LED red |
| Local bus branch disabled (LD) | LED red |
| Local bus error (E) | LED red |
| Communication power (UL) | LED green |
| Supply voltage segment circuit (SG) | LED green |
| Operating voltage (US) | LED green |
| **Local functions** | |
| Reconfiguration input | a pushbutton can be connected via an 8-pos. INLINE connector |
| **General data** | |
| Polarity reversal protection | yes |
| **Connector set for bus terminal** | 1 |

## Dimensional drawing




## Block diagram

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# ILC 200 IB Z

Inline Remote Field Controller

PC WORX

Design width 960

IBS c A C

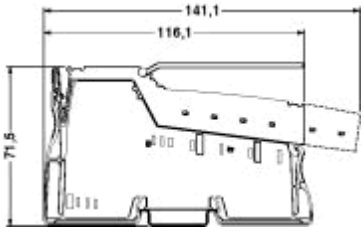
| Description | | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|---|
| **Inline Controller,** with electrical isolation Remote Field Controller for INTERBUS Inline | | **ILC 200 IB** | **27 29 80 0** | 1 |
| **User manual,** for the Inline Controller | German | **ILC 200 IB UM** | **27 29 71 6** | 1 |
| | English | **ILC 200 IB UM E** | **27 29 72 9** | 1 |
| **Automation software IBS PC WORX** | | **IBS PC WORX ..** (see info) | | |
| **Accessories** | | | | |
| **Connector set** | | **ILC IB-PLSET** | **27 29 62 2** | 1 |
| **Connection cable,** to connect Remote Field Controllers to a PC (RS-232) for PC WORX, 3 m in length | | **ILC PRG CAB** | **27 29 63 5** | 1 |
| **Additional documentation,** | | | | |
| **Installation Manual:** Structure and installation of the INTERBUS system | German | **IBS SYS INST UM** | **27 54 28 6** | 1 |
| | English | **IBS SYS INST UM E** | **27 54 80 4** | 1 |
| **I/O Systems Manual:** Collection of data sheets relating to INTERBUS components | German | **IBS SYS PRO UM** | **27 53 82 1** | 1 |
| | English | **IBS SYS PRO UM E** | **27 51 00 1** | 1 |

## Technical data

| | |
|---|---|
| **Mechanical design** | |
| Format | 960 x 129 x 70.5 mm |
| **Interfaces** | |
| Higher-level INTERBUS remote bus (slave) | 2 x 6-pos. Inline shield connector |
| Supply voltage | 8-pos. Inline connector |
| INTERBUS local bus (master) | Inline voltage jumper |
| Parameterization/operation/diagnostics | RS 232C, 6-pos. MINI-DIN connector (PS/2) |
| Integrated inputs /outputs | 2 Inline double signal connector |
| **IEC 61131 runtime system** | |
| Processing speed | 0.8 ms for 1K word or 1.6 ms for 1K bit instruction |
| Program memory | 384 Kbyte |
| Number of control tasks | 3 |

| | |
|---|---|
| Number of control tasks | 3 |
| Remanent data memory | 8 Kbyte NVRAM |
| **Power supply** | |
| Nominal value | 24 V DC |
| Ripple | 5 % |
| Range | 19.2 to 30 V |
| Current consumption | |
| (without connected I/O terminals) | approx. 100 mA |
| **Max. total permissible current consumption of all I/O terminals** | |
| Communications power (7 V DC) | ≤ 1.5 A |
| Analog supply (24 V DC) | 0.5 A |
| **INTERBUS** | |
| Number of process data words (slave) | 0..10 words (configurable) |
| Number of PCP words (slave) | 0, 1, 2 or words PCP (configurable) |
| Electrical isolation incoming/outgoing remote bus (slave) | 500 V AC test voltage |
| Max. number of Inline terminals that can be connected | 63 (observe current consumption) |
| **Local diagnostics** | |
| INTERBUS | LED: BA, RC, RD, LD |
| Power supply | LED: UL, UM, US |
| IEC 61131 runtime system | LED: FCRUN, SYSFAIL, RDY/RUN, BSA, FAIL, PF |

**Dimensional drawing**

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# IB IL CNT Z

1 counter input, 1 control input, 1 output, 24 V DC, 500 mA, 3-wire connection

Design width 24.4

| | (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| Spring clamp | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS counter terminal,** without connector set | **IB IL CNT** | **28 36 33 7** | 1 |
| **Accessories** | | | |
| **Connector set** | **IB IL AO/CNT-PLSET** | **27 32 66 4** | 1 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling,** several versions, see catalog part 3/4 | **ZBFM 6-...** | **08 03 57 9** | |

| **Technical Data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | Inline voltage jumper |
| **Power supply** | |
| Communications power | 7 V DC (via voltage jumper) |
| Current consumption | 45 mA, typical |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5% |
| Range | 19.2 to 30 V DC (ripple included) |
| Initiator power supply | main circuit |
| Switching output | segment circuit |
| **Electrical isolation** | |
| Logic / serial interface | 500 V AC test voltage [1]) |
| I/O / functional earth | 500 V AC test voltage [1]) |
| **Counter input** | |
| Operating modes | event counting, frequency/time measuring, pulse generation |
| Input frequency | 50 kHz |
| Input voltage | 24 V DC/ 5 V DC |
| Input current | 5 mA, typical |
| **Control input** | |

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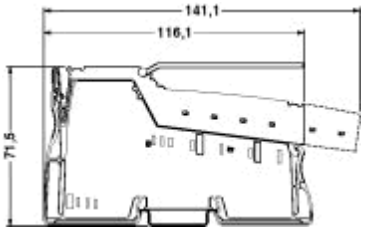
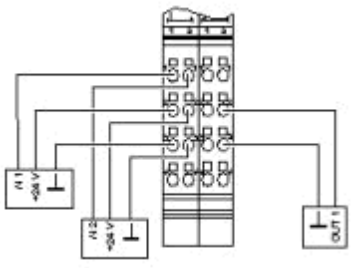
| | |
|---|---|
| **Control input** | |
| Connection method | 3-wire |
| Input voltage | 24 V DC/ 5 V DC |
| Input current | 5 mA, typical |
| **Outputs** | |
| Number of outputs | 1 |
| Connection method | 3-wire |
| Output voltage | 24 V DC |
| Output current | 500 mA |
| **Diagnostic messages via the bus** | |
| Short-circuit of the initiator supply | yes |
| Local diagnostics | |
| Bus active (D) | LED green on |
| Communications power not present (D) | LED green out |
| Communications power present / bus not active (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device defective (D) | LED green (flashes at 4 Hz) |
| Counter input source active (S) | LED yellow on |
| Control input gate active (G) | LED yellow on |
| Short circuit of the initiator supply (E) | LED red on |
| Output active | LED yellow on |

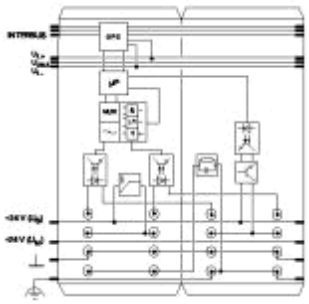
[1]) Only in system with bus terminal, power terminal and I/O terminal

## Dimensional drawing




## Block diagram





# IB IL 120 DI 1

1 input, 120 V AC
4-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 120 DI 1** | **28 36 70 6** | 1 |

| **Accessories** | | | |
|---|---|---|---|
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 30 mA |
| I/O voltage | 120 V AC (via voltage jumper) |
| Ripple | 10 % |
| Range | 108 to 132 V AC (ripple included) |
| Drawing initiator supply | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 1500 V AC test voltage[1]) |
| I/O/functional earth | 1500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| Previous/ next device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per input | LED yellow |
| **Inputs** | |

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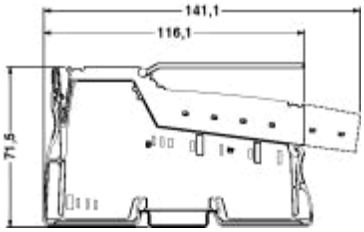
**Inputs**

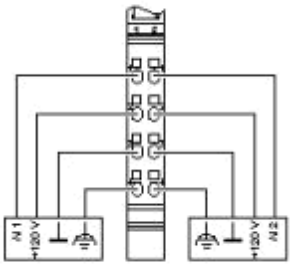
| | |
|---|---|
| Number of inputs | 1 |
| Connection method | 4-wire |
| Input current per channel | 5 mA at 120 V AC, 60 Hz |
| Allowable range | 0 V < $U_{in}$ < 132 V AC |
| Nominal current | |
| – "1"-signal | 79 V < $U_{in}$ < 132 V AC |
| – "0"-signal | 0 V < $U_{in}$ < 140 V AC |
| Delay time at signal change | approx. 30 ms |
| **Number of connectors necessary** | 1 |

[1]) Only in system consisting of bus terminal block, power terminal block and I/O terminal block.

**Dimensional drawing**




**Block diagram**

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# IB IL 24 DI 2 Z

2 inputs, 24 V DC
4-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DI 2** | **27 26 20 1** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 30 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing initiator supply | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| Previous/ next device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per input | LED yellow |
| **Inputs** | |

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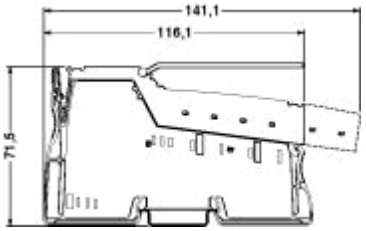
**Inputs**

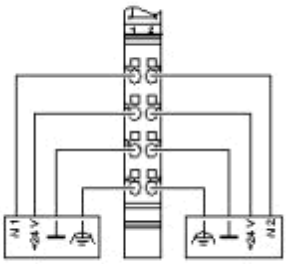
| | |
|---|---|
| Number of inputs | 2 |
| Connection method | 4-wire |
| Input current per channel | 5 mA to 24 V DC |
| Allowable range | - 30 V < $U_{in}$ < + 30 V DC |
| Nominal current | |
| – "1"-signal | + 15 V ≤ $U_{in}$ ≤ + 30 V DC |
| – "0"-signal | - 30 V ≤ $U_{in}$ ≤ + 5 V DC |
| Delay time at signal change | in µs range |
| **Number of connectors necessary** | 1 |

[1]) Only in system consisting of bus terminal block, power terminal block and I/O terminal block.

**Dimensional drawing**




**Block diagram**



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# IB IL 24 DI 4 Z

4 inputs, 24 V DC
3-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DI 4** | **27 26 21 4** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-12-ICP** | **27 27 61 1** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-12** | **27 26 34 0** | 10 |
| **Marker label** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 40 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing initiator supply | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| Previous/ next device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per input | LED yellow |
| **Inputs** | |

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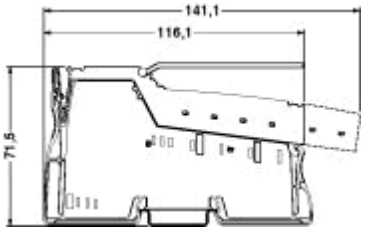
**Inputs**

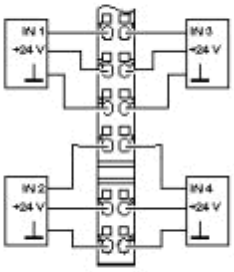
| | |
|---|---|
| Number of inputs | 4 |
| Connection method | 3-wire |
| Input current per channel | 3 mA at 24 V DC |
| Allowable range | - 30 V < $U_{in}$ < + 30 V DC |
| Nominal current | |
| – "1"-signal | + 15 V ≤ $U_{in}$ ≤ + 30 V DC |
| – "0"-signal | - 30 V ≤ $U_{in}$ ≤ + 5 V DC |
| Delay time at signal change | in µs range |
| **Number of connectors necessary** | 1 |

[1]) Only in system consisting of bus terminal block, power terminal block and I/O terminal block.

**Dimensional drawing**




**Block diagram**

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# IB IL 24 DI 8 Z

8 inputs, 24 V DC
4-wire connection
Design width 48.8

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DI 8** | **27 26 22 7** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 50 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing initiator supply | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| Previous/ next device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per input | LED yellow |
| **Inputs** | |

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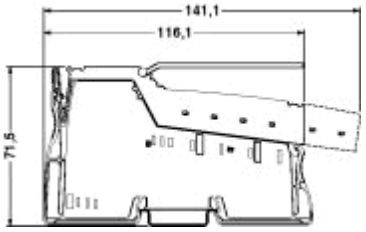
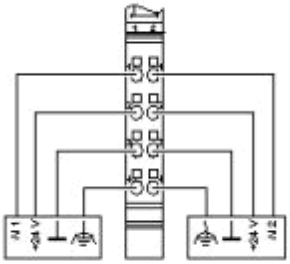
| | |
|---|---|
| **Inputs** | |
| Number of inputs | 8 |
| Connection method | 4-wire |
| Input current per channel | 5 mA at 24 V DC |
| Allowable range | - 30 V < $U_{in}$ < + 30 V DC |
| Nominal current | |
| – "1"-signal | + 15 V ≤ $U_{in}$ ≤ + 30 V DC |
| – "0"-signal | - 30 V ≤ $U_{in}$ ≤ + 5 V DC |
| Delay time at signal change | in µs range |
| **Number of connectors necessary** | 4 |

[1]) Only in system consisting of bus terminal block, power terminal block and I/O terminal block.

**Dimensional drawing**




**Block diagram**



# IB IL 24 DO 2-2A Z

2 outputs, 24 V DC, 2 A
4-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DO 2-2A** | **27 26 24 3** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 40 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing output voltage | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per output | LED yellow |

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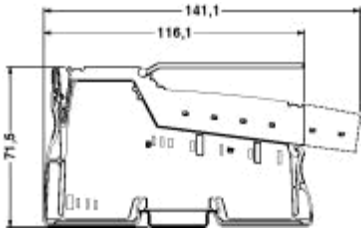
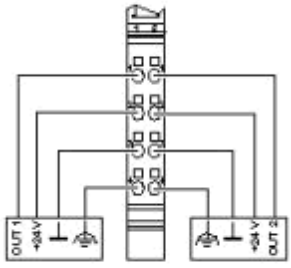
| | |
|---|---|
| ~~Status display per output~~ | ~~LED yellow~~ |
| **Diagnostics messages via the bus** | |
| Short-circuit, overload of an output | yes |
| **Outputs** | |
| Number of outputs | 2 |
| Connection method | 4-wire |
| Output voltage | Us - 1V |
| Signal delay | in µs range |
| Output current | |
| – max. per output | 2 A |
| – max. per terminal | 4 A (see data sheet) |
| Nominal load, ohmic | 48 W |
| Nominal load, lamp | 48 W |
| Nominal load, inductive | 12 Ω/1,2 H |
| Overload protection | yes |
| Short-circuit protection of outputs | yes |
| **Number of connectors necessary** | 1 |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**

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# IB IL 24 DO 4 Z

4 outputs, 24 V DC, 500 mA
3-wire connection
Design width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | | 0.2-1.5 | 0.2-1.5 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DO 4** | **27 26 25 6** | 1 |

| **Accessories** | | | |
|---|---|---|---|
| **I/O connector**, with color print | **IB IL SCN-12-OCP** | **27 27 62 4** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-12** | **27 26 34 0** | 10 |
| **Marker label** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 50 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing output voltage | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes with 0.5 Hz) |
| I/O error (D) | LED green (flashes with 2 Hz) |
| Previous device faulty (D) | LED green (flashes with 4 Hz) |
| Status display per output | LED yellow |

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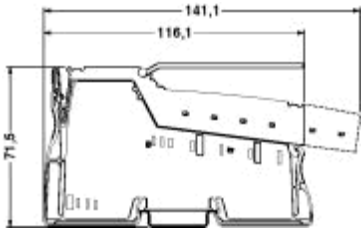
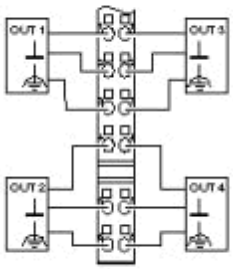
| | |
|---|---|
| **Diagnostics messages via the bus** | |
| Short-circuit, overload of an output | yes |
| **Outputs** | |
| Number of outputs | 4 |
| Connection method | 3-wire |
| Output voltage | Us - 1V |
| Signal delay | in µs range |
| Output current | |
| – max. per output | 500 mA |
| – max. per terminal | 2 A (see data sheet) |
| Nominal load, ohmic | 12 W |
| Nominal load, lamp | 12 W |
| Nominal load, inductive | 50 Ω/1,2 H |
| Overload protection | yes |
| Short-circuit protection of outputs | yes |
| **Number of connectors necessary** | 1 |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



# IB IL 24 DO 8 Z

8 outputs, 24 V DC, 500 mA
4-wire connection
Design width 48.8

| | (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL 24 DO 8** | **27 26 26 9** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| Technical data | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 70 mA |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Drawing output voltage | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device faulty (D) | LED green (flashes at 4 Hz) |

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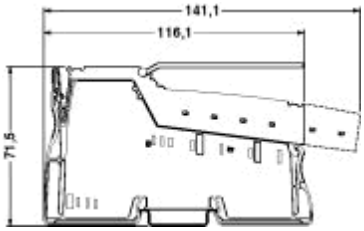
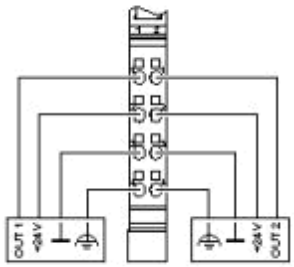
| | |
|---|---|
| Status display per output | LED yellow |
| **Diagnostics messages via the bus** | |
| Short-circuit, overload of an output | yes |
| **Outputs** | |
| Number of outputs | 8 |
| Connection method | 4-wire |
| Output voltage | Us - 1V |
| Signal delay | in µs range |
| Output current | |
| – max. per output | 500 mA |
| – max. per terminal | 4 A (see data sheet) |
| Nominal load, ohmic | 12 W |
| Nominal load, lamp | 12 W |
| Nominal load, inductive | 50 Ω/1.2 H |
| Overload protection | yes |
| Short-circuit protection of outputs | yes |
| **Number of connectors necessary** | 4 |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL DO 1 AC Z

1 output, 12 to 253 V AC, 500 mA
4-wire connection
Design width 12.2

| (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|
| Connection data | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS digital input terminal block** without connector | **IB IL DO 1 AC** | **28 36 74 8** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-8-CP** | **27 27 60 8** | 10 |
| **I/O connector**, without color printt | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Marker label** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| Technical data | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| Communication power | 7 V DC (via voltage jumper) |
| Current consumption | approx. 40 mA |
| I/O voltage | 120 V AC (via voltage jumper) |
| Ripple | 10 % |
| Range | 108 to 132 V AC (ripple included) |
| Drawing output voltage | segment circuit |
| **Electrical isolation** | |
| Logic UL/I/O | 1500 V AC test voltage[1]) |
| I/O/functional earth | 1500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | – |
| Previous device faulty (D) | LED green (flashes at 4 Hz) |
| Status display per output | LED yellow |

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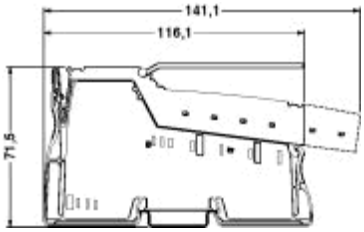
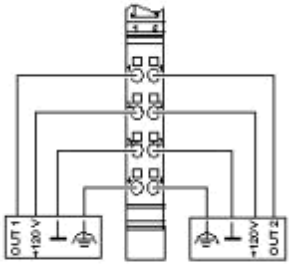
| | |
|---|---|
| Status display per output | LED yellow |
| **Diagnostics messages via the bus** | |
| Short-circuit, overload of an output | no |
| **Outputs** | |
| Number of outputs | 1 |
| Connection method | 4-wire |
| Output voltage | Us - 1V |
| Signal delay | max. 10 ms |
| Output current | |
| – max. per output | 500 mA |
| – max. per terminal | 500 mA |
| Nominal load, ohmic | depending on the operating voltage |
| Nominal load, lamp | depending on the operating voltage |
| Nominal load, inductive | depending on the operating voltage |
| Overload protection | no |
| Short-circuit protection of outputs | no |
| **Number of connectors necessary** | 1 |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**

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# IB IL 120 PWR IN/F Z

Power terminal block INTERBUS, 120 V AC
Width 12.2

| | (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS power or segment terminal block** without connector | **IB IL 120 PWR IN/F** | **27 31 70 4** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-PWR IN-CP** | **27 27 63 7** | 10 |
| **I/O connector**, without color print | **IB IL SCN-PWR IN** | **27 27 46 2** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| Supply voltage | 8-pos. INLINE power connector |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| I/O voltage | 120 V AC |
| Ripple | 10 % |
| Range | 108 to 132 V AC (ripple included) |
| Max. nominal current | 5 A (6.3 A fused) |
| **Electrical isolation** | |
| Logik/Peripherie | 1500 V AC test voltage[1]) |
| I/O/functional earth | 1500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Operating voltage display (US) | LED green |
| Fuse block or missing (E) | LED red |
| **General data** | |
| Polarity reversal protection | no |
| Surge voltage protection | no |
| Overload protection | no |
| **Number of connectors necessary** | 1 |

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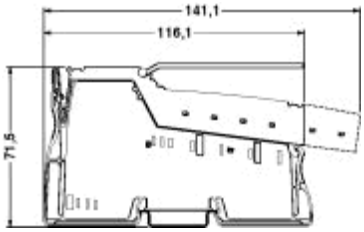
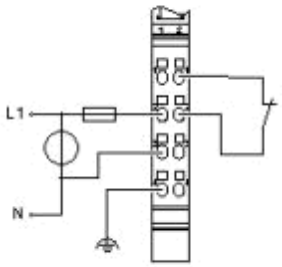
[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**

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# IB IL 24 PWR IN Z

Power terminal block INTERBUS, 24 V DC
Width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS power or segment terminal block** without connector | **IB IL 24 PWR IN** | **27 26 31 1** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-PWR IN-CP** | **27 27 63 7** | 10 |
| **I/O connector**, without color print | **IB IL SCN-PWR IN** | **27 27 46 2** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| Supply voltage | 8-pos. INLINE power connector |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| I/O voltage | 24 V DC |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Max. nominal current | 10 A |
| **Electrical isolation** | |
| Logik/Peripherie | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Operating voltage display (US) | LED green |
| **General data** | |
| Polarity reversal protection | yes |
| Surge voltage protection | yes |
| Overload protection | no |
| **Number of connectors necessary** | 1 |

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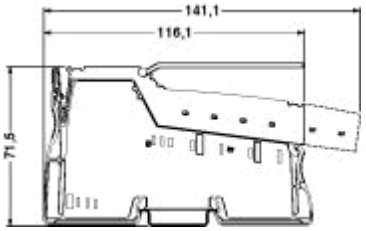
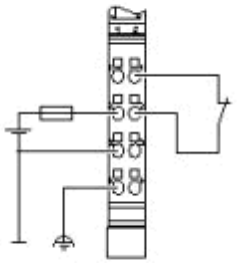
[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL 24 SEG / SEG-ELF Z

Segment terminal block INTERBUS, 24 V DC, with electronic protection

Width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS power or segment terminal block** without connector | **IB IL 24 SEG** | **27 26 32 4** | 1 |
| | **IB IL 24 SEG-ELF** | **27 27 78 9** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-PWR IN-CP** | **27 27 63 7** | 10 |
| **I/O connector**, without color print | **IB IL SCN-PWR IN** | **27 27 46 2** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| Technical data | IB IL 24 SEG | IB IL 24 SEG-ELF |
|---|---|---|
| **Interfaces** | | |
| Supply voltage | via voltage jumper | |
| INTERBUS local bus | INLINE voltage jumper | |
| **Power supply** | | |
| Communication power | – | 7 V DC via voltage jumper |
| Current consumption | – | approx. 50 mA |
| I/O voltage | 24 V DC | |
| Ripple | 5 % | |
| Range | 19.2 to 30 V DC (ripple included) | |
| Max. nominal current | 10 A | 1 to 4 A (configurable via bus, Default: 4 A) |
| **Electrical isolation** | | |
| Logic/I/O | 500 V AC test voltage[1]) | |
| I/O/functional earth | 500 V AC test voltage[1]) | |
| **Local diagnostics** | | |
| Operating voltage display (US) | LED green | LED green |
| Fuse blown or missing (E) | – | LED red |
| Overload (E) | – | – |

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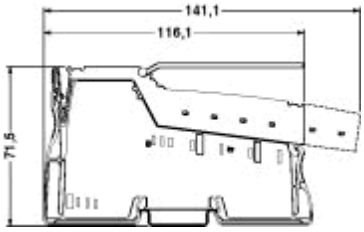
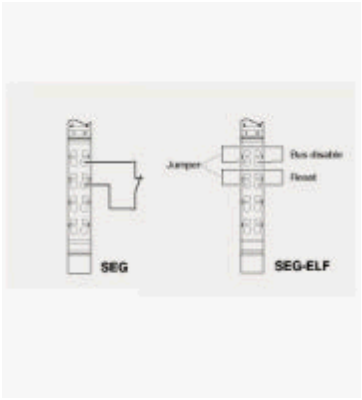
| | | |
|---|---|---|
| Bus active (D) | – | LED green on |
| Communication power not present (D) | – | LED green off |
| Communication power present/bus inactive (D) | – | LED green (flashes at 0.5 Hz) |
| I/O errorr (D) | – | LED green (flashes at 2 Hz) |
| Previous device faulty (D) | – | LED green (flashes at 4 Hz) |
| **Diagnostics messages via the bus** | | |
| Voltage segment circuit not present | – | |
| Overload segment circuit | – | |
| **General data** | | |
| Polarity reversal protection | no | |
| Surge voltage protection | no | |
| Overload protection | no | |
| **Number of connectors necessary** | 1 | |

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**

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# IB IL 24 SEG/F Z

Segment terminal block INTERBUS, 24 V DC, with fuse

Width 12.2

| | (IEC) | rigid | flexible | |
|---|---|---|---|---|
| | [mm²] | solid | stranded | AWG |
| Connection data | | | | |
| - Spring cage | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS power or segment terminal block** without connector | **IB IL 24 SEG/F** | **27 27 74 7** | 1 |
| **Accessories** | | | |
| **I/O connector**, with color print | **IB IL SCN-PWR IN-CP** | **27 27 63 7** | 10 |
| **I/O connector**, without color print | **IB IL SCN-PWR IN** | **27 27 46 2** | 10 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| Supply voltage | via voltage jumper |
| INTERBUS local bus | INLINE voltage jumper |
| **Power supply** | |
| I/O voltage | 24 V DC |
| Ripple | 5 % |
| Range | 19.2 to 30 V DC (ripple included) |
| Max. nominal current | 5 A (6.3 A fused) |
| **Electrical isolation** | |
| Logik/Peripherie | 500 V AC test voltage[1]) |
| I/O/functional earth | 500 V AC test voltage[1]) |
| **Local diagnostics** | |
| Operating voltage display (US) | LED green |
| Fuse blown or missing (E) | LED red |
| **General data** | |
| Polarity reversal protection | no |
| Surge voltage protection | no |
| Overload protection | no |
| **Number of connectors necessary** | 1 |

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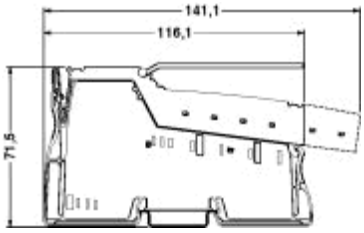
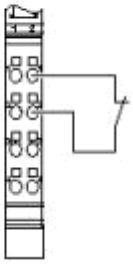
**Number of connectors necessary** 1

[1]) Only in system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**




**Block diagram**



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# IB IL 400 ELR 1-3A Z

Power-level terminal block as direct starter up to 1.5 kW / 400 V AC
Design width 63

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS-INLINE power-level terminals block** | | | |
| – electronic direct starter | **IB IL 400 ELR 1-3A** | **27 27 35 2** | 1 |
| **Accessories** | | | |
| **Input connector** | **IB IL 400 CN-PWR-IN** | **28 36 07 8** | 10 |
| **Power bridges** | **IB IL 400 CN-BRG** | **28 36 08 1** | 10 |
| **Motor circuit connector** | **GMVSTBW2,5/4-ST-7,62HV** | **18 93 95 7** | 10 |
| **Operator hand panel** | **IBS HVO** | **28 36 05 2** | 1 |
| **Brake module** | **IB IL 400 BR/DC** | **27 27 39 4** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| Technical data | |
|---|---|
| **Interfaces** | INTERBUS-INLINE local bus |
| **Power supply** | |
| Communication power | 7 V DC (via potential routing) |
| Current consumption | approx. 60 mA |
| I/O voltage | 24 V DC (via potential routing) |
| Ripple | 5 % |
| Range | 19.2 V DC to 30 V DC (ripple included) |
| Mains | |
| Operating voltage $U_N$ | 200 V AC to 440 V AC 50 to 60 Hz |
| **Motor starter** | |
| Number of outputs, connection method | 1 (3-phase), via COMBICON |
| Phase voltage | 200 V AC to 400 V AC, 50 to 60 Hz |
| min. output voltage at nominal current | $U_{mains}$ – 3 V |
| Nominal current per phase | 3.5 A |
| Surge voltage suppression | ≥ 910 V |
| Phase angle | cos φ ≥ 0,3 |
| Nominal output capacity at $U_N$ = 400 V AC | 1.5 kW (2-pos.) |
| **Motor protection** | |
| Parameterization | via INTERBUS; 0.2 to 3.6 A, steps from 50/100/200 mA |
| Emergency shutdown | Class 10 A |

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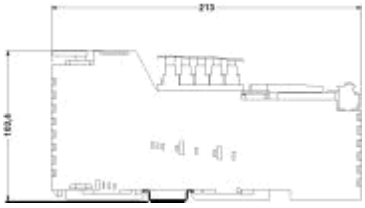
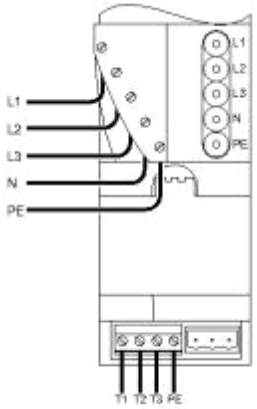
| | |
|---|---|
| Current monitoring | current monitoring |
| **Manual operation / emergency operation** | |
| Number of inputs, connection method | 2, via MINI-COMBICON |
| Input current per channel | approx. 3 mA at 24 V DC |
| **Brake output** | |
| Slot for expansion | see article IB IL 400 BR/DC |
| **Local diagnostics** | |
| Bus active (D) | LED on |
| Communication power not present (D) | LED out |
| Communication power present/ bus inactive (D) | LED (flashes with 0.5 Hz) |
| I/O error (D) | LED (flashes with 2 Hz) |
| Previous device faulty (D) | LED (flashes with 4 Hz) |
| Operator hand panel (M) | LED yellow |
| Error (E) | LED red |
| Status motor output | LED yellow |
| **Diagnostics messages via the bus** | |
| Addressing not possible | yes |
| Overcurrent | yes |

## Dimensional drawing



## Block diagram

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# IB IL 400 ELR R-3A Z

Power-level terminal block for reversing load up to 1.5 kW / 400 V AC
Design width 63

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS-INLINE power-level terminals block** | | | |
| – electronic reversing load starter | **IB IL 400 ELR R-3A** | **27 27 37 8** | 1 |
| **Accessories** | | | |
| **Input connector** | **IB IL 400 CN-PWR-IN** | **28 36 07 8** | 10 |
| **Power bridges** | **IB IL 400 CN-BRG** | **28 36 08 1** | 10 |
| **Motor circuit connector** | **GMVSTBW2,5/4-ST-7,62HV** | **18 93 95 7** | 10 |
| **Operator hand panel** | **IBS HVO** | **28 36 05 2** | 1 |
| **Brake module** | **IB IL 400 BR/DC** | **27 27 39 4** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | INTERBUS-INLINE local bus |
| **Power supply** | |
| Communication power | 7 V DC (via potential routing) |
| Current consumption | approx. 60 mA |
| I/O voltage | 24 V DC (via potential routing) |
| Ripple | 5 % |
| Range | 19.2 V DC to 30 V DC (ripple included) |
| Mains | |
| Operating voltage $U_N$ | 200 V AC to 440 V AC 50 to 60 Hz |
| **Motor starter** | |
| Number of outputs, connection method | 1 (3-phase), via COMBICON |
| Phase voltage | 200 V AC to 400 V AC, 50 to 60 Hz |
| min. output voltage at nominal current | $U_{mains}$ – 3 V |
| Nominal current per phase | 3.5 A |
| Surge voltage suppression | ≥ 910 V |
| Phase angle | cos φ ≥ 0,3 |
| Nominal output capacity at $U_N$ = 400 V AC | 1.5 kW (2-pos.) |
| **Motor protection** | |
| Parameterization | via INTERBUS; 0.2 to 3.6 A, steps from 50/100/200 mA |
| Emergency shutdown | Class 10 A |

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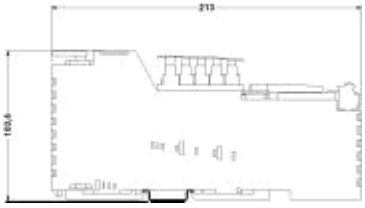
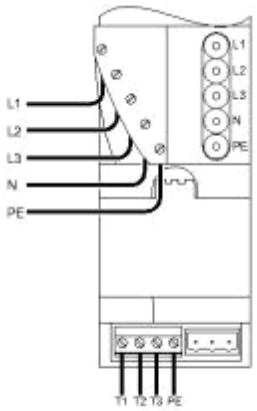
| | |
|---|---|
| Current monitoring | current monitoring |
| **Manual operation / emergency operation** | |
| Number of inputs, connection method | 3, via MINI-COMBICON |
| Input current per channel | approx. 3 mA at 24 V DC |
| **Brake output** | |
| Slot for expansion | see article IB IL 400 BR/DC |
| **Local diagnostics** | |
| Bus active (D) | LED on |
| Communication power not present (D) | LED out |
| Communication power present/ bus inactive (D) | LED (flashes with 0.5 Hz) |
| I/O error (D) | LED (flashes with 2 Hz) |
| Previous device faulty (D) | LED (flashes with 4 Hz) |
| Operator hand panel (M) | LED yellow |
| Error (E) | LED red |
| Status motor output | LED yellow |
| **Diagnostics messages via the bus** | |
| Addressing not possible | yes |
| Overcurrent | yes |

## Dimensional drawing



## Block diagram

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# IB IL 400 MLR 1-8A Z

Power-level terminal block for reversing load up to 4 kW / 400 V AC
Design width 63

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS-INLINE power-level terminals block** | | | |
| – electromechanical direct starter | **IB IL 400 MLR 1-8A** | **27 27 36 5** | 1 |
| **Accessories** | | | |
| **Input connector** | **IB IL 400 CN-PWR-IN** | **28 36 07 8** | 10 |
| **Power bridges** | **IB IL 400 CN-BRG** | **28 36 08 1** | 10 |
| **Motor circuit connector** | **GMVSTBW2,5/4-ST-7,62HV** | **18 93 95 7** | 10 |
| **Operator hand panel** | **IBS HVO** | **28 36 05 2** | 1 |
| **Brake module** | **IB IL 400 BR/DC** | **27 27 39 4** | 1 |
| **Labeling field** | **IB IL FIELD 8** | **27 27 51 5** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | INTERBUS-INLINE local bus |
| **Power supply** | |
| Communication power | 7 V DC (via potential routing) |
| Current consumption | approx. 60 mA |
| I/O voltage | 24 V DC (via potential routing) |
| Ripple | 5 % |
| Range | 19.2 V DC to 30 V DC (ripple included) |
| Mains | |
| Operating voltage $U_N$ | 200 V AC to 440 V AC 50 to 60 Hz |
| **Motor starter** | |
| Number of outputs, connection method | 1 (3-phase), via COMBICON |
| Phase voltage | 200 V AC to 400 V AC, 50 to 60 Hz |
| min. output voltage at nominal current | $U_{mains}$ – 3 V |
| Nominal current per phase | 8 A |
| Surge voltage suppression | ≥ 910 V |
| Phase angle | cos φ ≥ 0,3 |
| Nominal output capacity at $U_N$ = 400 V AC | 4 kW (2-pos.) |
| **Motor protection** | |
| Parameterization | via INTERBUS; 0.2 to 8 A, steps from 50/100/200 mA |
| Emergency shutdown | Class 10 A |

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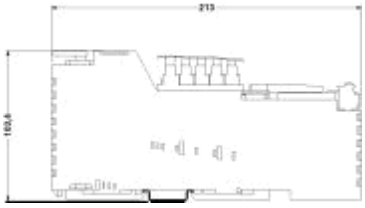
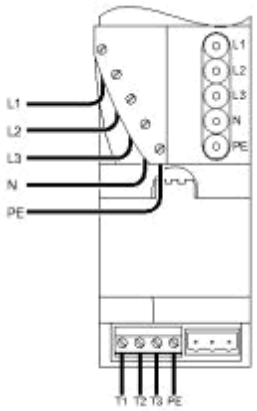
| | |
|---|---|
| Current monitoring | current monitoring |
| **Manual operation / emergency operation** | |
| Number of inputs, connection method | 2, via MINI-COMBICON |
| Input current per channel | approx. 3 mA at 24 V DC |
| **Brake output** | |
| Slot for expansion | see article IB IL 400 BR/DC |
| **Local diagnostics** | |
| Bus active (D) | LED on |
| Communication power not present (D) | LED out |
| Communication power present/ bus inactive (D) | LED (flashes with 0.5 Hz) |
| I/O error (D) | LED (flashes with 2 Hz) |
| Previous device faulty (D) | LED (flashes with 4 Hz) |
| Operator hand panel (M) | LED yellow |
| Error (E) | LED red |
| Status motor output | LED yellow |
| **Diagnostics messages via the bus** | |
| Addressing not possible | yes |
| Overcurrent | yes |

## Dimensional drawing



## Block diagram

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# IB IL 24 MUX MA Z

INTERBUS field multiplexer
Design width 49

| (IEC) [mm²] | rigid solid | flexible stranded | AWG |
|---|---|---|---|
| Connection data | | | |
| - Spring cage | 0.2-1.5 | 0.2-1.5 | 24-16 |

c A C

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS field multiplexer,** without connector | **IB IL 24 MUX MA** | **27 18 41 3** | 1 |
| **Accessories** | | | |
| **Connector set** | **IB IL MUX-PLSET** | **28 36 03 6** | 1 |
| **Labeling field** | **IB IL FIELD-8** | **27 27 51 5** | 10 |
| **Zack strip labeling,** | **ZBFM 6-...** | | |
| **Remote bus cable,** to connect the multiplexer stations | **IBS RBC METER-T** | **28 06 28 6** | 1 |
| **System Manual** | | | |
| – German | **IB IL MUX UM** | **27 18 42 6** | 1 |
| – English | **IB IL MUX UM E** | **27 18 43 9** | 1 |
| **Surge voltage protection DATA-MODUTRAB,** for INTERBUS field multiplexer | **MT-IBS-MUX** | **27 65 01 3** | 1 |

## Technical data

| | |
|---|---|
| **Interfaces** | |
| **– Remote bus** | |
| – Connector | INLINE connector 8-pos with spring cage terminals |
| – Remote bus length | max. 12 km |
| – Interface type | RS 485, terminated |
| – Number of I/O signals | 504 (digital I/Os) or 252 (analog I/Os) |
| **– Local bus** | |
| – Connector | contacts of INLINE local bus |
| – Number of connectable INTERBUS INLINE I/O modules | max. 63<br>without additional terminal max. 20 (observe total perm. current) |
| **Power supply** | |
| Supply voltage: nominal value / residual ripple / perm. | 24 V DC / 3.6 Vpp / 20 V to 30 V (ripple included) |

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range

| | |
|---|---|
| Current consumption without connected IB IL I/O modules | 90 mA |
| Connector | INLINE connector 8-pos with spring cage terminals |

**Electrical isolation**

| | |
|---|---|
| Remote bus interface / power supply | 500 V AC[1]) |
| Remote bus interface / IB IL local bus | 500 V AC[1]) |

**Local diagnostics**

| | |
|---|---|
| Operating voltage display (UL) | LED green |
| Module Stop (ST) | LED red |
| Configuration error (CE) | LED red |
| Remote bus error (RE) | LED red |
| Local bus error (LE) | LED red |
| Alarm output | relay contact (n/o), 100 V DC / 1 A |

**Ambient conditions**

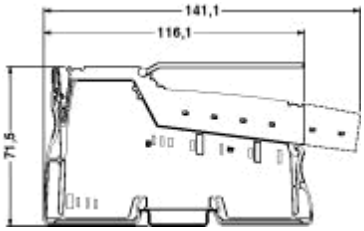
| | |
|---|---|
| Ambient temperature (operation) | 0 °C to + 55 °C |

**General data**

| | |
|---|---|
| Weight | 250 g |

[1]) Only on system with bus terminal block, power terminal block and I/O terminal block

**Dimensional drawing**

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# GMVSTBW2,5/4-ST-7,62HV

Motor circuit connector

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| The motor circuit connector is a COMBI-CON plug connector for the connection of a three-phase motor (U, V, W, PE) using the screw-clamp method.<br>The connection cross section is a max. of 2,5 $mm^2$ (14 AWG).. | GMVSTBW2,5/ 4-ST-7,62HV | 18 93 95 7 | 10 |

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# IB IL 400 BR/DC

Zubehör Bremsmodul

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| The brake module is a passive, electronic brake control switch with an optional con-nection to the power terminal via a 3-pos. inverted COMBICON connector. The connection to the brake is made using a 2-pos. COMBICON plug with a connection cross section of up to 2.5 mm 2 (14 AWG). | IB IL 400 BR/DC | 27 27 39 4 | 1 |

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# IB IL 400 CN-BRG

Power bridges

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| The pluggable power bridge serves to carry the power bus between the power ter-minals.<br>The maximum current carrying capacity is 20 A. | IB IL 400 CN-BRG | 28 36 08 1 | 5 |

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# IB IL 400 CN-PWR-IN

Power connector

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| The input connector is a plug connector to feed the power bus (L1, L2, L3, N, PE) using screw-clamp terminal blocks with a maximum current of 20 A.<br>Their connection cross section is a max. of 2.5 mm 2 (14 AWG). | IB IL 400 CN-PWR-IN | 28 36 07 8 | 5 |

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# IBS HVO

Operator Hand Panel (OHP)

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| A motor connected to the power terminal can be manually controlled with the help of the external operator hand panel,. The connection is made using a 4-pos. MINI-COM-BICON connector with flange. Operation using the hand panel is also possible without a bus in operation. This allows individual motors to be addressed during the construction of, for example, a subsystem. connection | IBS HVO | 28 36 05 2 | 1 |

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# IB IL 24 TC Z

Thermistor terminal block
Design width 12

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS INLINE thermistor terminal block** | **IB IL 24 TC** | **27 27 41 7** | 1 |
| **Accessories** | | | |
| **Shield connector,** without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 10 |
| **I/O connector,** without color print | **IB IL SCN-8** | **27 26 33 7** | 10 |
| **Labeling field** | **IB IL FIELD-2** | **27 27 50 1** | 10 |
| **Zack strip labeling** | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | INTERBUS-INLINE local bus |
| **Power supply** | |
| Power supply voltage | 7 V DC (via potential routing) |
| Current consumption | approx. 80 mA |
| Analog voltage | 24 V DC (via potential routing) |
| Current consumption | approx. 25 mA |
| **Thermistor input** | |
| Number of outputs | 1 |
| Connection method | 2-wire |
| Temperature sensor | PTC thermistor acc. to DIN 44 081or DIN 44 082 |
| Working area (e.g. Drilling sensor) | |
| – Switch-off, error due to excessive temperature | nominal response temperature NAT + 5 K (R ≥ 4 kΩ) |
| – Alarm display, entering alarm window | nominal response temperature NAT - 5 K (R ≥ 1.65 kΩ) |
| – Release, below alarm window | nominal response temperature NAT - 5 K (R < 1.65 kΩ) |
| Thermistor current | < 1 mA |
| No-load voltage | 7.5 V |
| Filter time | typ. 100 ms |
| Electrical isolation | yes |
| **Local diagnostics** | |
| Bus active (D) | LED green on |
| Communication power not present (D) | LED green off |
| Communication power present/ bus inactive (D) | LED green (flashes with 0.5 Hz) |
| I/O error (supply for thermistor evaluation) (D) | LED green (flashes with 2 Hz) |
| Previous device faulty (D) | LED green (flashes with 4 Hz) |
| General error (break, short-circuit, over temperature) (E) | LED red |

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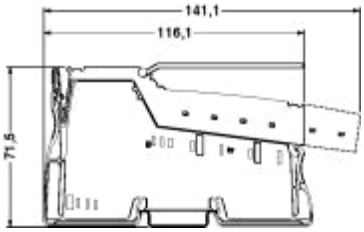
| | |
|---|---|
| General error (break, short circuit, over temperature) (E) | LED red |
| Alarm range (A) | LED red |
| **Diagnostics via the bus** | |
| Short-circuit | yes |
| | yes |

## Dimensional drawing




## Block diagram

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# IB IL RS232 Z

1 serial RS232 input and output channel

| | (IEC) [mm$^2$] | rigid solid | flexible stranded | AWG |
|---|---|---|---|---|
| Connection data | | | | |
| Spring clamp | | 0.2-1.5 | 0.2-1.5 | 24-16 |

| Description | Type | Order No. | Pcs. Pkt. |
|---|---|---|---|
| **INTERBUS RS-232 function terminal,** without connector set | **IB IL RS232** | **27 27 34 9** | 1 |
| **Accessories** | | | |
| **Shield connector,** without color print | **IB IL SCN-6 SHIELD** | **27 26 35 3** | 5 |
| **Labeling field** | **IB IL FIELD 2** | **27 27 50 1** | 10 |
| **User manual** | **IB IL RS232 UM** | **27 32 66 7** | 1 |
| **Zack strip labeling,** several versions, see catalog part 3/4 | **ZBFM 6-...** | | |

| **Technical data** | |
|---|---|
| **Interfaces** | |
| INTERBUS local bus | Inline voltage jumper |
| **Power supply** | |
| Communications power | 7 V DC (via voltage jumper) |
| Current consumption | on request |
| I/O voltage | 24 V DC (via voltage jumper) |
| Ripple | 5% |
| Range | 19.2 to 30 V DC (ripple included) |
| Interface supply from | segment circuit |
| **Electrical isolation** | |
| Logic / serial interface | 500 V AC test voltage [1]) |
| I/O / functional earth | 500 V AC test voltage [1]) |
| **Serial input/output channel** | |
| Input buffer | 4 Kbytes |
| Output buffer | 4 Kbytes |
| Transmission speed | 110 - 19200 bauds, configurable |
| Parity | even, odd or no parity |
| Transmission type | transparent mode, dual buffer mode, 3964R, XON/XOFF |
| **Local diagnostics** | |
| Bus active (D) | LED green on |

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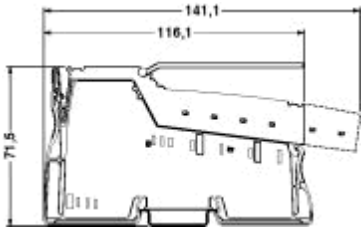
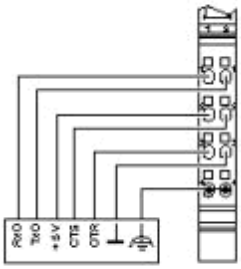
| | |
|---|---|
| Communications power not present (D) | LED green out |
| Communications power present/ bus not active (D) | LED green (flashes at 0.5 Hz) |
| I/O error (D) | LED green (flashes at 2 Hz) |
| Previous device defective (D) | LED green (flashes at 4 Hz) |
| PCP communication active (TR) | LED green on |
| Data is sent (TxD) | LED yellow on |
| Data is received (RxD) | LED yellow on |
| **Number of connectors necessary** | 1 |

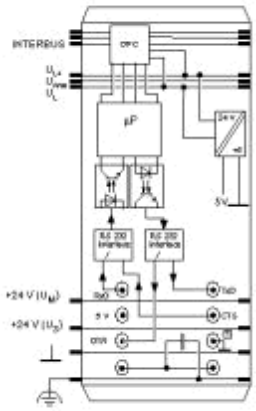
[1]) Only in system with bus terminal, power terminal and I/O terminal

**Dimensional drawing**




**Block diagram**

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